

Iowa Department of Natural Resources

Draft Title V Operating Permit

Name of Permitted Facility: John Deere Foundry Waterloo

Facility Location: 2000 Westfield Avenue
Waterloo, IA 50704

Air Quality Operating Permit Number: 02-TV-012R1

Expiration Date:

Permit Renewal Application Deadline: (6 months before expiration date)

EIQ Number: 92-1317

Facility File Number: 07-01-010

Responsible Official

Mr. David T. Rodger

General Manager

John Deere Foundry Waterloo

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Phone #: (319) 292-7697

Permit Contact Person for the Facility

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Environmental Engineer

John Deere Foundry Waterloo

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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulation
EAF.....	electric arc furnace
EIQ.....	emissions inventory questionnaire
°F.....	degrees Fahrenheit
gr/dscf.....	grains per dry standard cubic foot
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
IF.....	induction furnace
lb/hr.....	pounds per hour
lb/MMBtu.....	pounds per million British thermal units
LPG.....	liquefied petroleum gas
MVAC.....	motor vehicle air conditioner
NG.....	natural gas
NSPS.....	new source performance standard
ppmv.....	parts per million by volume
scfm.....	standard cubic feet per minute
TPY.....	tons per year
USEPA.....	United States Environmental Protection Agency

Pollutants

PM ₁₀	particulate matter ten microns or less in diameter
PM.....	particulate matter
SO ₂	Sulfur dioxide
NO _x	Nitrogen oxides
VOC.....	volatile organic compound
CO.....	Carbon monoxide
HAP.....	hazardous air pollutant
DMEA.....	Dimethylethylamine

I. Facility Description and Equipment List

Facility Name: John Deere Foundry Waterloo

Permit Number: [02-TV-012R1](#)

Facility Description: This facility is a gray iron foundry that manufactures agricultural equipment components. ([SIC 3321](#))

Equipment List

The double border around certain emission sources indicates that the enclosed equipment is grouped in a table in the Emission Point-Specific Conditions section of the permit.

A. Isocure and Pepset Lines

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
082	P-082	Isocure Core Making Line 801 EU P-090	95-A-002-S1
113	P-113	Isocure Core Making Line 802 EU P-090	95-A-003-S1
091	Jobbing Floor	Jobbing Floor Core Cell	95-A-005-S1

B. Core Ovens

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
069	P-069	D787 OSI Core Oven West	01-A-946
071	P-071	D785 OSI Core Oven West	01-A-948
072	P-072	D786-D785 OSI Core Oven East	01-A-949
105	P-105	D753 Cell No. 1 Core Oven A	01-A-944
107	P-107	D753 Cell No. 1 Core Oven B	01-A-945

C. Baghouse-Controlled Sources (Exterior-Vented)

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
248	P-248	ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment	97-A-139-S1
249			97-A-138-S2
AlloyBH	P-120B-IF	Alloy Addition System	99-A-349
MDDBH1	MDD	Melt Didion Drum Rotary Sand Separator	05-A-422
MDDBH2	MDD	Melt Didion Drum Rotary Sand Separator	05-A-423
CLRBH #1	P-009A	D850 Primary Blast Cabinet	94-A-582
CLRBH #2	P-010	D850 Core Knockout Cabinet	94-A-583-S2
CLRBH #3	P-011A	D850 Spotblast Cabinet	94-A-584-S2
IFDPBH	P-004-IF	IF Dust Pelletizer	98-A-958-S1
ESP	P-174	East Sand Pelletizer-Bin Vent	78-A-022
IFBH	P-3IF	Induction Furnaces; EU 001-IF, EU 002-IF, EU 003-IF & EU 004-IF	98-A-957-S3
SDSABH	P-162	D775 Sand Delivery Storage Area	72-A-040-S3
IBH1E	P-031	ML802 Casting & Sand Grinding-System I	77-A-117-S5
IBH2			77-A-118-S5
IBH3W			77-A-119-S5
IIBH1E	P-034	ML802 Casting & Sand Grinding-System II	77-A-120-S6
IIBH2			77-A-121-S5
IIBH3			77-A-122-S5
IIBH4W			77-A-123-S5
IIIBH1S	P-010A P-017	D853 Core Knockout Cab. Pts. D, E, F & G D853 Primary Blast Cabinet & Grinders	77-A-209-S6
IIIBH2			77-A-210-S6
IIIBH3N			77-A-211-S6
IVBH1S	P-018	D853 Spotblast Cabinet-System IV	77-A-207-S4
IVBH2S	P-019	D863 Reblast Cabinet-System IV	77-A-208-S4
	P-023	D851 Tumblast Machines-System IV	

D. Fugitive and Internally Vented Sources

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
012	P-012	D802 Tumblast	Internally Vented
148	P-148	D753 New Sand Delivery	Internally Vented
133	P-133	ML802 Ductile Iron Conversion	Internally Vented
146	P-146	D737 Pouring Floor	Fugitive
161	P-161	D775 New Sand Unload Station	Internally Vented
172	P-172	D850 Sand Transfer-Mud Dock	Fugitive
173	P-173	East Sand Pelletizer Loadout	Fugitive
3500 3501 3502 3503 3504 3505 3510 3511 3512 3514 3520 3521 3523 3524 3525 3526 3530 3531 3533 3534 3535 3536	P-183	D801 Bldg. 8001 Cooling Shed – 22 Exhaust	Fugitive

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
3125 3126 3127 3130 3135 3147	P-123A	ML801 Cooling Area-Pouring/Casting	Internally Vented
	P-123B	ML801Casting Cooling Area	Fugitive
	P-126	ML801 Shakeout Casting Cooling	Internally Vented
3235 3236 3237 3240 3241	P-132A	ML802 Cooling Area Exhaust-Pouring	Internally Vented
3242 3245 3249	P-132B	ML802 Cooling Area Exhaust-Casting Cooling	Fugitive
D808	P-242	D808 Sand Reclaim	Internally Vented
3000 3002 3003 3004 3005 3008 3009 3010 3011 3015 3016 3017 3018 3019	P-120B	D830 Iron Inoculation	Internally Vented
3020 3021 3022 3023 3200 3201	P-120C	D830 Molten Metal Transfer	Fugitive
	P-120F	D830 Slag Loadout	Fugitive
D753	P-213	D753 Core	Internally Vented
D758	P-218	D785 Cold Box Core Cell	Internally Vented
D737	P-220	D737 Core	Internally Vented

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
P-205	D736 Plantwide Welding
P-117	D737 Pepset Resin I Tank
P-119	D737 Pepset Resin II Tank
P-120G	D830 Clean 15-Ton Ladle
P-147	D737 Green Sand Shakeout Release
P-163	D701 Isocure Resin I Tank No. 1
P-164	D701 Isocure Resin I Tank No. 2
P-166	D701 Isocure Resin II Tank No. 1
P-167	D701 Isocure Resin II Tank No. 2
P-178	D740 Solvent Degreaser Tank
P-179	D802 Solvent Degreaser Tank
P-180	D801 Solvent Degreaser Tank
P-182*	Gas-Fired Heating Equipment (Natural Gas with Propane back-up)
P-185D	ML 801, 802 Preheat Pouring Ladle: Propane (6 direct heaters, 5.14 MMBtu/hr each) D830 Preheat Tundish Ladle: Propane (2 direct heaters, 5.14 MMBtu/hr each)

* Emission units P-182 consist of the equipment identified in Table Gas-Fired Heating Equipment, below. The heaters are natural gas-fired, with propane as a back-up fuel.

Table Gas-Fired Heating Equipment

Source Description	Status	Number of Units	MMBtu/hr per Unit
General Building, Overhead Door Heater No. 1	Active	1	1.730
General Building, Overhead Door Heater No. 2	Active	1	1.730
General Building, Overhead Door Heater No. 3	Active	1	0.820
General Building, General Area Space Heater	Active	5	2.000
General Building, Penthouse No. 1 Space Heater	Active	3	1.050
General Building, Penthouse No. 2 Space Heater	Active	2	0.750
General Building, Penthouse No. 3 Space Heater	Active	2	0.450
General Building, Penthouse No. 4 Substation Heater	Active	1	0.175
General Building, Penthouse No. 5 Substation Heater	Active	1	0.250
General Building, Penthouse No. 6 Substation Heater	Active	1	0.175
General Building, Penthouse No. 7 Substation Heater	Active	1	0.250
General Building, Unit Roof Heaters	Active	27	5.400
General Building, Unit Roof Heaters	Active	39	6.480
General Building, Central Heater Boiler Building 8001	Active	1	0.900
General Building, Central Water Heater Building 8001	Active	1	0.900
General Building, Central Water Heater Building 8002	Active	1	1.247
General Building, D775 Sand Shed Space Heater	Active	2	0.700

Source Description	Status	Number of Units	MMBtu/hr per Unit
General Building, D730 Mud Dock Space Heater No. 1	Active	1	0.150
General Building, D730 Mud Dock Space Heater No. 2	Active	1	0.150
ML 801 ETA Baghouse B Space Heaters	Active	3	0.500
ML 801 ETA Baghouse B Space Heater-Pelletizer	Active	1	0.200
Melt Department, IF Baghouse	Active	2	0.500
Melt Department, IF Baghouse	Active	1	0.200
Class 1 Store Room Boiler (water heater)	Active	1	1.900
Manager's Office Boiler (water heater)	Active	1	1.900
Security Building Heater	Active	1	2.000
Locker Room Heater, 8001	Active	1	2.000
East Pelletizer Heater	Active	1	0.750
D830 Space Heater EAF BH#1	Inactive	1	0.075
General Building, Heating System Building 8005	Inactive	1	0.825
General Building, Heating System Building 1030	Inactive	1	1.562

II. Plant-Wide Conditions

Facility Name: John Deere Foundry Waterloo

Permit Number: [02-TV-012R1](#)

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

Permit Duration

The term of this permit is: Five (5) years

[Commencing on:](#)

[Ending on:](#)

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits

Unless specified otherwise in the Emission Point-Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity

Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO₂): 500 parts per million by volume

Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).

Authority for Requirement: 567 IAC 23.3(2)"a" (as revised 7/21/1999)

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking

reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

Compliance Plan

The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.

Unless otherwise noted in Section III of this permit, John Deere Foundry Waterloo is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, John Deere Foundry Waterloo shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

NSPS and NESHAP Applicability

The emissions units of John Deere Foundry Waterloo are not subject to a NSPS subpart at this time.

The operations at this facility are subject to the requirements of 40 CFR, Part 63, Subpart EEEEE, "National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries".

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE
567 IAC 23.1(3)"de"

III. Emission Point-Specific Conditions

Facility Name: John Deere Foundry Waterloo

Permit Number: 02-TV-012

Emission Point ID Number: EP 082 & 113 (Internally Vented)

Emission Unit Description

Table ISOCURE

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (lb/hr)
082	P-082	Isocure Core Making Line 801 EU P-090	CE-082	Scrubber	DMEA Catalyst	3.73
113	P-113	Isocure Core Making Line 802 EU P-090	CE-113	Scrubber	DMEA Catalyst	3.73

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from the emission points identified in Table ISOCURE-A shall not exceed the levels specified below.

Pollutant: VOC

Emission Limit: 95 TPY ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit [95-A-002-S1](#)

Iowa DNR Construction Permit [95-A-003-S1](#)

⁽¹⁾ Limit for all Isocure core making operations. Limit can not be increased without obtaining a PSD permit.

Operational Limits & Requirements

The owner/operator of the equipment identified in Table ISOCURE-A shall comply with the operational limits and requirements listed below.

Process throughput:

1. The amount of Part I and Part II resins used in all Isocure core making operations shall not exceed 1,400,000 pounds per 12 month rolling period.
2. The amount of Core Release Agent used in all Isocure core making operations shall not exceed 16,000 pounds per 12 month rolling period.
3. The amount of N-dimethylethylamine (DMEA) catalyst used in all Isocure core making operations shall not exceed 98,000 pounds per 12 month rolling period.
4. The VOC content of any resin used in all Isocure core making operations shall not exceed 65% by weight.
5. The exhaust from this line shall be connected to a scrubber to control DMEA emissions whenever in operation. [This requirement applies to the core boxes, where the DMEA catalyst is actually used.]

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. These records shall demonstrate compliance with all applicable operating limits. Records shall be legible and maintained in an orderly manner.

1. Record the amount of Part I and Part II resins used in all Isocure core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
2. Record the amount of Core Release Agent used in all Isocure core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
3. Record the amount of DMEA used in all Isocure core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
4. Record the VOC content of any resin used in all Isocure core making operations, in weight percent.

Authority for Requirement: Iowa DNR Construction Permit [95-A-002-S1](#)
Iowa DNR Construction Permit [95-A-003-S1](#)

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP 091 (Internally Vented)

Associated Equipment

Associated Emission Unit ID Number: Jobbing Floor

Emission Unit vented through this Emission Point: Jobbing Floor

Emission Unit Description: Jobbing Floor Core Cell

Raw Material/Fuel: Pepset Resins I & II, Pepset Catalyst

Rated Capacity: 24.43 lb/hr

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: VOC

Emission Limit: 29 TPY⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 95-A-005-S1

⁽¹⁾ Limit for all Pepset core making operations. Limit can not be increased without obtaining a PSD permit.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The amount of Part I and Part II resins used in all Pepset core making operations shall not exceed 200,000 pounds per 12 month rolling period.
2. The amount of Core Release Agent used in all Pepset core making operations shall not exceed 8,000 pounds per 12 month rolling period.
3. The amount of Pepset catalyst used in all Pepset core making operations shall not exceed 6,000 pounds per 12 month rolling period.
4. The VOC content of any resin used in all Pepset core making operations shall not exceed 65% by weight.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. These records shall demonstrate compliance with all applicable operating limits. Records shall be legible and maintained in an orderly manner.

1. Record the amount of Part I and Part II resins used in all Pepset core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
2. Record the amount of Core Release Agent used in all Pepset core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
3. Record the amount of Pepset catalyst used in all Pepset core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
4. Record the VOC content of any resin used in all Pepset core making operations, in weight percent.

Authority for Requirement: Iowa DNR Construction Permit 95-A-005-S1

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP 069, 071, 072, 105 & 107 (Internally Vented)

Emission Unit Description

Table CORE OVENS 1

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (ton/hr, MMBtu/hr)
069	P-069	D787 OSI Core Oven West	Sand, NG/LPG	11.06, 2.0
071	P-071	D785 OSI Core Oven West	Sand, NG/LPG	11.06, 2.0
072	P-072	D786-D785 OSI Core Oven East	Sand, NG/LPG	11.06, 2.0
105	P-105	D753 Cell No. 1 Core Oven A	Sand, NG/LPG	9.22, 2.5
107	P-107	D753 Cell No. 1 Core Oven B	Sand, NG/LPG	9.22, 2.5

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the following specified levels.

Table CORE OVENS 2

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM ₁₀ Limit (lb/hr)	PM Limit (gr/scf)	SO ₂ Limit (ppmv)	Construction Permit #
069	P-069	40% ⁽¹⁾	0.229	0.1	500	01-A-946
071	P-071	40% ⁽¹⁾	0.229	0.1	500	01-A-948
072	P-072	40% ⁽¹⁾	0.229	0.1	500	01-A-949
105	P-105	40% ⁽¹⁾	0.396	0.1	500	01-A-944
107	P-107	40% ⁽¹⁾	0.396	0.1	500	01-A-945

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permits specified in Table CORE OVENS 2

- ⁽¹⁾ An exceedance of the indicator opacity of (10 %) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM₁₀

Emission Limit: As specified in Table OVEN2

Authority for Requirement: Iowa DNR Construction Permits specified in Table CORE OVENS 2

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permits specified in Table CORE OVENS 2

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit: 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)"e"

Iowa DNR Construction Permits specified in Table CORE OVENS 2

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table CORE OVENS 3.

Table CORE OVEN 3

Emission Point Number	Emission Unit Number	Construction Permit #	Stack Characteristics				
			Height	Diameter (inches)	Exhaust Flowrate (scfm)	Exhaust Temp. (°F)	Discharge Style
069	P-069	01-A-946	47.8	15	1,500	230	Vertical Unobstructed
071	P-071	01-A-948	44.0	15	1,500	230	Vertical Unobstructed
072	P-072	01-A-949	44.0	15	1,500	220	Vertical Unobstructed
105	P-105	01-A-944	44.7	12	3,500	220	Vertical Unobstructed
107	P-107	01-A-945	44.7	12	3,500	220	Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permits specified in Table CORE OVENS 3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: **EP 248**

Associated Equipment

Associated Emission Unit ID Number: P-248

Emissions Control Equipment ID Number: **CE ML801BHA**

Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-248

Emission Unit Description: ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment

Raw Material/Fuel: Metal/Sand

Rated Capacity: 41.10 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 97-A-139-S1

⁽¹⁾ **If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.**

Pollutant: PM₁₀

Emission Limit: 3.67 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 97-A-139-S1

Pollutant: Particulate Matter

Emission Limit: 0.1gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 97-A-139-S1

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:

- The baghouse and filter bags must be operated and maintained according to manufacturer's instructions and specifications.

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- Maintenance of baghouse and replacement filters.

Authority for Requirement: Iowa DNR Construction Permit 97-A-139-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 58

Stack Opening, (feet, dia.): 4.33

Exhaust Flow Rate (acfm): 60,600

Exhaust Temperature (°F): 120

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 97-A-139-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE ML801BHA Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: **EP 249**

Associated Equipment

Associated Emission Unit ID Number: P-248

Emissions Control Equipment ID Number: ML801BHB

Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-248

Emission Unit Description: ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment

Raw Material/Fuel: Metal/Sand

Rated Capacity: 41.10 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 97-A-138-S2

⁽¹⁾ *If visible emissions are observed other than at startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.*

Pollutant: PM₁₀

Emission Limit: 25.0 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 97-A-138-S2

Pollutant: Particulate Matter

Emission Limit: 0.1gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 97-A-138-S2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:

1. Table 249

Emission Point Number	Emission Unit Number	Dust Pickup Areas
249	P-248	<div>The following units shall be associated with Mold Line 801 and vented to emission point 249:</div> <div><div><div>▪ Primary Shakeout</div><div>▪ Secondary Shakeout</div><div>▪ New Dust Silo Mixer #1</div><div>▪ Cycle Discharge</div><div>▪ Sand Belt</div><div>▪ Elevator</div><div>▪ Drag Spill Conv Dsch</div><div>▪ Cope Punchout</div><div>▪ Belt 603</div><div>▪ Belt 604</div><div>▪ Belt 103F</div></div><div><div>▪ Belt 611</div><div>▪ Sand Bin</div><div>▪ Sand Muller</div><div>▪ Drag Machine</div><div>▪ Belt 606</div><div>▪ SK Cope Machine</div><div>▪ Lumpbreaker</div><div>▪ Sand Cooler</div><div>▪ Belt 106</div><div>▪ Additional Feed System</div></div></div>

Authority for Requirement: Iowa DNR Construction Permit 97-A-138-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 110

Stack Opening, (inches, dia.): 132

Exhaust Flow Rate (acfm): 375,000

Exhaust Temperature (°F): 110

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 97-A-138-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE ML801BHB Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: EP AlloyBH

Associated Equipment

Associated Emission Unit ID Numbers: EU 120B-IF

Emissions Control Equipment ID Number: CE AlloyBH

Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: 120B-IF

Emission Unit Description: Alloy Adding System

Raw Material/Fuel: Alloy

Rated Capacity: 0.12 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 99-A-349

⁽¹⁾ If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM₁₀

Emission Limit: 0.64 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 99-A-349

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf, 0.64 lb/hr

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 99-A-349

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 66

Stack Opening, (inches, dia.): 22

Exhaust Flow Rate (acfm): 10,000

Exhaust Temperature (°F): 90

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 99-A-349

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE AlloyBH Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: EP MDDBH1

Associated Equipment

Associated Emission Unit ID Number: Melt Didion Drum, EU MDD

Emissions Control Equipment ID Number: CE MDDBH1

Emissions Control Equipment Description: Melt Didion Drum Baghouse #1

Emission Unit vented through this Emission Point: Melt Didion Drum, EU MDD

Emission Unit Description: Melt Didion Drum Rotary Sand Separator

Raw Material/Fuel: Metal/Sand

Rated Capacity: 65 tons/hr metal, 10 tons/hr sand

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 05-A-422

⁽¹⁾ An exceedance of the indicator opacity of "no visible emissions" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM₁₀

Emission Limit: 0.57 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-422

Pollutant: Particulate Matter

Emission Limit: 0.57 lb/hr, 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

Iowa DNR Construction Permit 05-A-422

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 68.9

Stack Opening, (inches, dia.): 24

Exhaust Flow Rate (scfm): 12,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 05-A-422

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE MDDBH1 Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: EP MDDBH2

Associated Equipment

Associated Emission Unit ID Number: Melt Didion Drum, EU MDD

Emissions Control Equipment ID Number: CE MDDBH2

Emissions Control Equipment Description: Melt Didion Drum Baghouse #2

Emission Unit vented through this Emission Point: Melt Didion Drum, EU MDD

Emission Unit Description: Melt Didion Drum Rotary Sand Separator

Raw Material/Fuel: Metal/Sand

Rated Capacity: 65 tons/hr metal, 10 tons/hr sand

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 05-A-423

⁽¹⁾ An exceedance of the indicator opacity of "no visible emissions" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM₁₀

Emission Limit: 2.51 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-423

Pollutant: Particulate Matter

Emission Limit: 2.51 lb/hr, 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

Iowa DNR Construction Permit 05-A-423

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 68.9

Stack Opening, (inches, dia.): 40

Exhaust Flow Rate (scfm): 40,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 05-A-423

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE MDDBH2 Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: CLRBH #1

Associated Equipment

Associated Emission Unit ID Number: P-009a

Emissions Control Equipment ID Number: [CE CLRBH #1](#)

Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-009a

Emission Unit Description: D850 Primary Blast Cabinet

Raw Material/Fuel: Metal

Rated Capacity: 27 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 20%

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 94-A-582

Pollutant: PM₁₀

Emission Limit: 0.0041 gr/scf, 1.38 lb/hr, 6.04 TPY

Authority for Requirement: Iowa DNR Construction Permit 94-A-582

Pollutant: Particulate Matter

Emission Limit: 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:

1. The emissions control system must be in operation at all times that the production equipment is in operation.
2. The following pickup points shall be controlled by this fabric filter:
 - D850 blast points A through U
 - D850 blast points AA, AB, AC, and AD

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

1. The record must include, at a minimum, the days and hours of observations, and the date of inspections and adjustments.
2. The record shall also show that the control system has been operated and maintained according to the manufacturer's specifications.

Authority for Requirement: Iowa DNR Construction Permit 94-A-582

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 86.8

Stack Opening, (feet, dia.): 5

Exhaust Flow Rate (acfm): 40,000

Exhaust Temperature (°F): 100

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 94-A-582

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE CLRBH #1 Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: CLRBH #2

Associated Equipment

Associated Emission Unit ID Number: P-010

Emissions Control Equipment ID Number: **CE CLRBH #2**

Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-010

Emission Unit Description: D850 Core Knockout Cabinet

Raw Material/Fuel: Metal

Rated Capacity: 10 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 94-A-583-S2

⁽¹⁾ If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM₁₀

Emission Limit: 0.88 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 94-A-583-S2

Pollutant: Particulate Matter

Emission Limit: 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

Iowa DNR Construction Permit 94-A-583-S2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:

1. The baghouse and filter bags must be operated and maintained according to manufacturer's instructions and specifications.

2. The following pickup points shall be controlled by this fabric filter:
- D850 Reblast Points A, B, C, D, E, F, G, H,I, and J
 - Sand Dropout Hopper
 - Sand Return Hood 1
 - Sand Return Belt 1
 - D850 Core Knockout Points A, B, and C

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- Maintenance of baghouse and replacement filters.

Authority for Requirement: Iowa DNR Construction Permit 94-A-583-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 86.8

Stack Opening, (feet, dia.): 5

Exhaust Flow Rate (scfm): 50,000

Exhaust Temperature (°F): 100

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 94-A-583-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE CLRBH #2 Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: CLRBH #3

Associated Equipment

Associated Emission Unit ID Number: P-011A
Emissions Control Equipment ID Number: CE CLRBH #3
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-011A
Emission Unit Description: D850 Spotblast Cabinet
Raw Material/Fuel: Metal
Rated Capacity: 19.5 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 94-A-584-S2

⁽¹⁾ If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM₁₀

Emission Limit: 1.78 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 94-A-584-S2

Pollutant: Particulate Matter

Emission Limit: 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

Iowa DNR Construction Permit 94-A-584-S2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:

1. The baghouse and filter bags must be operated and maintained according to manufacturer's instructions and specifications.
2. The following pickup points shall be controlled by this fabric filter:
 - D850 Spotblast Cabinet Points A, B, C, D, and E
 - D850 Core KO Blowoff Cabinet PU 1 and 2
 - Conveyor Belt Hopper 406-A PU 1 and 2
 - Conveyor Belt 107 PU 1
 - Conveyor Belt 408 PU 1
 - Conveyor Belt 409 PU 1 and 2
 - Conveyor Belt 410 PU 1 and 2
 - Crossover Pan 401-A PU 1, 2, 3, and 4
 - Hopper
 - Shot Pan PU 1, 2, and 3
 - Tramp Iron Reclaimer PU 1 and 2
 - Tramp Iron Sand Elevator
 - Belt 103-B PU 1
 - Belt 103-C PU 1, 2, and 3
 - Belt 103-D PU 1 and 3
 - Belt 411-A PU 3, 4, and 5
 - Belt 412-A PU 2 and 3

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- Maintenance of baghouse and replacement filters.

Authority for Requirement: Iowa DNR Construction Permit 94-A-584-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 86.8

Stack Opening, (feet, dia.): 5

Exhaust Flow Rate (scfm): 50,000

Exhaust Temperature (°F): 100

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 94-A-584-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE CLRBH #3 Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: **IFDPBH**

Associated Equipment

Associated Emission Unit ID Number: P-004-IF
Emissions Control Equipment ID Number: **CE** IFDPBH
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-004-IF
Emission Unit Description: IF Dust Pelletizer
Raw Material/Fuel: IF Dust
Rated Capacity: 0.07 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 98-A-958-S1

- ⁽¹⁾ **An exceedance of the indicator opacity of "no visible emissions" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).**

Pollutant: PM₁₀

Emission Limit: 0.18 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 98-A-958-S1

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 98-A-958-S1

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Hours of operation:

- This silo is limited to operating a maximum of eight (8) hours per day.

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- Record the number of hours per day this silo is operated.

Authority for Requirement: Iowa DNR Construction Permit 98-A-958-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 86

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 3,655

Exhaust Temperature (°F): 120

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 98-A-958-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP ESP

Associated Equipment

Associated Emission Unit ID Number: P-174
Emissions Control Equipment ID Number: CE ESP
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-174
Emission Unit Description: East Sand Pelletizer-Bin Vent
Raw Material/Fuel: Sand
Rated Capacity: 5.22 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limit: 0.05 gr/scf
Authority for Requirement: 567 IAC 23.4(6)
Iowa DNR Construction Permit 78-A-022

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: **EP IFBH**

Associated Equipment

Associated Emission Unit ID Number: P-3IF

Emissions Control Equipment ID Number: **CE IFBH**

Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-3IF

Emission Unit Description: **Induction Furnaces; EU 001-IF, EU 002-IF, EU 003-IF & EU 004-IF**

Raw Material/Fuel: Metal

Rated Capacity: **EU 001-IF, EU 002-IF, EU 003-IF: 22 tons/hr each**
EU 004-IF: 25 Metric tons/hr

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit **98-A-957-S3**

⁽¹⁾ **An exceedance of the indicator opacity of "no visible emissions" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).**

Pollutant: PM₁₀

Emission Limit: 11.9 lb/hr

Authority for Requirement: Iowa DNR Construction Permit **98-A-957-S3**

Pollutant: Particulate Matter

Emission Limit: 0.1gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit **98-A-957-S3**

Pollutant: Particulate Matter

Emission Limit: 0.005gr/dscf ⁽²⁾

Authority for Requirement: 567 IAC 23.1(4) "de"

Iowa DNR Construction Permit **98-A-957-S3**

⁽²⁾ **The emissions source shall comply with either the emission limit for PM or the emission limit for Total Metal HAPs per §63.7690(a)(1).**

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit: 18.5 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 98-A-957-S3

Pollutant: Lead (Pb)
Emission Limit: 0.13 lb/hr, 0.57 TPY
Authority for Requirement: Iowa DNR Construction Permit 98-A-957-S3

Pollutant: Total Metal (HAP)
Emission Limit: 0.0004 gr/dscf ⁽²⁾
Authority for Requirement: 567 IAC 23.1(4) "de"
Iowa DNR Construction Permit 98-A-957-S3

⁽²⁾ The emissions source shall comply with either the emission limit for PM or the emission limit for Total Metal HAPs per §63.7690(a)(1).

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 80
Stack Opening, (inches, dia.): 100
Exhaust Flow Rate (acfm): 100,000 to 200,000 (i.e., 1 or 2 fans)
Exhaust Temperature (°F): 150
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 98-A-957-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating limits for this emission unit shall be:

- A. The permittee shall comply with the work practice standards of §63.7700.
- B. The permittee shall comply with the operation and maintenance requirements of §63.7710.
- C. The permittee shall comply with the general compliance requirements of §63.7720 including the development of a written startup, shutdown, and malfunction plan.
- D. The permittee shall demonstrate compliance with either the emission limit for PM or Total Metal HAPs in §63.7690(a)(1) no less frequently than every 5 years per §63.7731(a).
- E. The permittee shall comply with the notification requirements of §63.7750.

F. The permittee shall comply with the reporting requirements of §63.7751.

G. The permittee shall comply with the record keeping requirements of §63.7752.

Reporting & Record keeping:

All records as required by this permit shall be kept per §63.7753 and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. Per §63.7753, the permittee shall keep each record for 5 years. The permittee shall keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to the requirements in §63.10(b)(1). The permittee may keep the records for the previous 3 years offsite provided they are in a form suitable and readily available for expeditious review.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Stack Testing:

Pollutant: Particulate Matter ^{(1) (2)}

Stack Test to be Completed by – Every 5 years

Test Method - 40 CFR 60, Appendix A, Method 5

Authority for Requirement - Iowa DNR Construction Permit 98-A-957-S3

- ⁽¹⁾ The emissions source shall demonstrate compliance with either the emission limit for PM or Total Metal HAPs per §63.7734(a)(1) and §63.7731(a).
⁽²⁾ Initial stack testing completed July 30-31, 2007 and demonstrated compliance with PM limit. NOTE: Testing is required with project 08-068 due to the installation of the additional induction furnace.

Pollutant: HAP ^{(1) (2)}

Stack Test to be Completed by – Every 5 years

Test Method - 40 CFR 60, Appendix A, Method 5

Authority for Requirement - Iowa DNR Construction Permit 98-A-957-S3

- ⁽¹⁾ The emissions source shall demonstrate compliance with either the emission limit for PM or Total Metal HAPs per §63.7734(a)(1) and §63.7731(a).
⁽²⁾ Initial stack testing completed July 30-31, 2007 and demonstrated compliance with PM limit. NOTE: Testing is required with project 08-068 due to the installation of the additional induction furnace.

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required?

Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required?

Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required?

Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE IFBH Baghouse

The emission Point IFBH is not subject to a CAM Plan, because the PM emissions from this source are covered under 40 CFR, Part 63, Subpart EEEEE, "National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries".

Authority for Requirement: 567 IAC 23.1(4) "de"
40 CFR Part 63 Subpart EEEEE

Emission Point ID Number: SDSABH

Associated Equipment

Associated Emission Unit ID Number: P-162
Emissions Control Equipment ID Number: CE 162
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-162
Emission Unit Description: D775 Sand Delivery Storage Area
Raw Material/Fuel: Sand
Rated Capacity: 27.79 tons per hour

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit: 40% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 72-A-040-S3

⁽¹⁾ If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM₁₀

Emission Limit: 0.65 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 72-A-040-S3

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 72-A-040-S3

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:

- The emissions control system must be in operation at all times that the production equipment is in operation.

Authority for Requirement: Iowa DNR Construction Permit 72-A-040-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet from ground): 57

Stack Opening, (inches, dia.): 24

Exhaust Flow Rate (acfm): 12,600

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 72-A-040-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE 162 Baghouse

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: IBH1E, IBH2, IBH3W, IIBH1E, IIBH2, IIBH3, IIBH4W, IIIBH1S, IIIBH2, IIIBH3N, IVBH1S & IVBH2S

Emission Unit Description

Table BH1

Emission Point Number	Control Equipment Number	Control Equipment Description	Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (ton/hr)
IBH1E	IBH1E	Baghouse	P-031	ML802 Casting & Sand Grind. - System I	Metal	38.60
IBH2	IBH2	Baghouse				
IBH3W	IBH3W	Baghouse				
IIBH1E	IIBH1E	Baghouse	P-034	ML802 Casting & Sand Grind. - System II	Metal	38.60
IIBH2	IIBH2	Baghouse				
IIBH3	IIBH3	Baghouse				
IIBH4W	IIBH4W	Baghouse				
IIIBH1S	IIIBH1S	Baghouse	P-010A	D853 Core Knockout Cab. Pts. D, E, F & G, D853 Primary Blast Cabinet	Metal	20.00
IIIBH2	IIIBH2	Baghouse	P-017		Metal	23.86
IIIBH3N	IIIBH3N	Baghouse				
IVBH1S	IVBH1S	Baghouse	P-018	D853 Spotblast Cabinet-System IV	Metal	12.00
			P-019	D863 Reblast Cabinet-System IV	Metal	12.00
IVBH2S	IVBH2S	Baghouse	P-023	D851 Tumbblast Machines-System IV	Metal	12.00

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from each emission point identified in Table BH2 shall not exceed the following specified levels.

Table BH2

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM ₁₀ Limit (lb/hr)	PM Limit (gr/scf)	Construction Permit #
IBH1E	P-031	20%	2.82	0.1	77-A-117-S5
IBH2		20%	2.82	0.1	77-A-118-S5
IBH3W		20%	2.82	0.1	77-A-119-S5
IIBH1E	P-034	10% ⁽¹⁾	2.93	0.01	77-A-120-S6
IIBH2		10% ⁽¹⁾	2.93	0.01	77-A-121-S5
IIBH3		10% ⁽¹⁾	2.93	0.01	77-A-122-S5
IIBH4W		10% ⁽¹⁾	2.93	0.01	77-A-123-S5
IIIBH1S	P-010A P-017	20% ⁽²⁾	1.72	0.1	77-A-209-S6
IIIBH2		20% ⁽²⁾	1.72	0.1	77-A-210-S6
IIIBH3N		20% ⁽²⁾	1.72	0.1	77-A-211-S6
IVBH1S	P-018	20%	1.74	0.1	77-A-207-S4
IVBH2S	P-019 P-023	20%	1.74	0.1	77-A-208-S4

⁽¹⁾ An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

⁽²⁾ An exceedance of the indicator opacity of "20%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Opacity

Emission Limit: Refer to Table BH2

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permits specified in Table BH2

Pollutant: PM₁₀

Emission Limit: As specified in Table BH2

Authority for Requirement: Iowa DNR Construction Permits specified in Table BH2

Pollutant: Particulate Matter

Emission Limit: 0.1gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permits specified in Table BH2

Emission Limit: 0.01gr/scf

Authority for Requirement: 567 IAC 23.4(13)

Iowa DNR Construction Permits specified in Table BH2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:

1. The emission control system[s] must be in operation at all times that the production equipment is in operation.
2. The emission control equipment must be maintained and operated according to manufacturer's instructions and specifications.

Table BH3

Emission Point Number	Emission Unit Number	Dust Pickup Areas
IBH1E IBH2 IBH3W	P-031	<p>The following emission units shall be vented to the common header feeding System 1, which vents to Collectors 1, 2, and 3:</p> <ul style="list-style-type: none">▪ Shakeout PU Nos. 1 and 2▪ Belt 607-2 PU Nos. 2, 3, 5, and 6▪ Belt 603-2 PU Nos. 1, 2, 3, and 4▪ Hold Over Hopper▪ Primary SO Pan 1A PU No. 1▪ Belt 614-2 PU Nos. 1 and 2▪ Primary SO Pan 2 PU No. 1A▪ Sand Cooling PU Nos. 1 and 2▪ Primary SO Pan 3A PU No. 1 and 2▪ Primary SO PU Nos. 2 and 7▪ Muller 301-2 PU No. 2
IIBH1E IIBH2 IIBH3 IIBH4W	P-034	<p>The following emission units shall be vented to the common header feeding System 2, which vents to Collectors 1, 2, 3, and 4:</p> <ul style="list-style-type: none">▪ Belt 601-2 PU No. 1 through 9, & 11▪ Belt 105-2/103F No. 1 and 2▪ P & F Unload Station▪ Muller 301-2 PU No. 1▪ Degate Conv. 803-2A▪ Secondary SO Hood▪ Secondary SO Conveyor Nos. 1 & 2▪ Pan Conveyor Exhaust▪ Cylinder Head Punch Exhaust▪ Belt 609-2 PU Nos. 1 and 2▪ Belt 106 PU No. 1▪ Open End Duct▪ Belt 608-2/609-2 No. 1▪ Belt 608-2 PU No. 1▪ Rotary Screen Nos. 1, 2, and 3▪ Rotary Screen Discharge▪ Belt 611-2 PU No. 1▪ Belt 602-2 PU No. 1▪ Belt 303-2A PU Nos. 1 and 2▪ Belt 603-2 PU Nos. 1, 2, and 3▪ Parting Spray Booth▪ Belt 105-2 PU No. 1▪ Sand Hopper▪ SO Conveyor 803-2 PU No. 1▪ 802 Mold Spray System
IIIBH1S IIIBH2 IIIBH3N	P-010A P-017	<p>The following emission units shall be vented to the combined collection system serving System 3, Collectors 1, 2, and 3:</p> <ul style="list-style-type: none">▪ D853 Blast Points A, C, D, E, F, K, L▪ D853 Blast W Elevator▪ D853 Blast E Elevator▪ Blast Dropout Box▪ Core Knockout Points D, E, F, & G▪ 5 Blast Gates▪ Blast Dropout Hopper

Table BH3 (continued)

Emission Point Number	Emission Unit Number	Dust Pickup Areas
IVBH1S IVBH2S	P-018 P-019 P-023	<p>The following emission units shall be vented to the combined collection system serving System 4, Collectors 1 and 2:</p> <ul style="list-style-type: none"> ▪ Tumblast No. 1 Points A through H ▪ Tumblast No. 2 Points A through H ▪ Tumblast No. 3 Points A through H ▪ Tumblast No. 4 Points A through I ▪ Stand Grind (TB) ▪ D790 Bin & Plow No. 1 ▪ D790 Sand Heater ▪ D853 Spotblast Points A through D ▪ Stand Grinder (Crib) ▪ D863 Reblast Points A through I ▪ D790 Sand Mixer

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- A log of inspections, adjustments, and maintenance performed on the baghouse[s] including replacement of filter bags.

Authority for Requirement: Iowa DNR Construction Permits specified in Table BH2

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table BH4.

Table BH4

Emission Point Number	Emission Unit Number	Construction Permit #	Stack Characteristics				
			Stack Height, (ft, from ground)	Diameter (inches)	Exhaust Flowrate	Exhaust Temp. (°F)	Discharge Style
IBH1E	P-031	77-A-117-S5	80' 5"	47	33,488 (acfm)	100	Vertical Unobstructed
IBH2		77-A-118-S5	80' 5"	47	33,488 (acfm)	100	Vertical Unobstructed
IBH3W		77-A-119-S5	80' 5"	47	33,488 (acfm)	100	Vertical Unobstructed
IIBH1E	P-034	77-A-120-S6	80' 5"	47	35,450 (scfm)	100	Vertical Unobstructed
IIBH2		77-A-121-S5	75' 5"	47	35,450 (scfm)	100	Vertical Unobstructed
IIBH3		77-A-122-S5	75' 5"	47	35,450 (scfm)	100	Vertical Unobstructed
IIBH4W		77-A-123-S5	75' 5"	47	35,450 (scfm)	100	Vertical Unobstructed

Table BH4 (continued)

Emission Point Number	Emission Unit Number	Construction Permit #	Stack Characteristics				
			Stack Height, (ft, from ground)	Diameter (inches)	Exhaust Flowrate	Exhaust Temp. (°F)	Discharge Style
IIIBH1S	P-010A P-017	77-A-209-S6	88'	60	52,508 (scfm)	75	Vertical Unobstructed
IIIBH2		77-A-210-S6	88'	60	52,508 (scfm)	100	Vertical Unobstructed
IIIBH3N		77-A-211-S6	88'	60	52,508 (scfm)	100	Vertical Unobstructed
IVBH1S	P-018 P-019	77-A-207-S4	88'	60	40,575 (acfm)	100	Vertical Unobstructed
IVBH2S	P-023	77-A-208-S4	88'	60	40,575 (acfm)	100	Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permits specified in Table BH4

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Authority for Requirement: 567 IAC 22.108(3)

CAM Plan for CE IBH1E, IBH2, IBH3W, IIBH1E, IIBH2, IIBH3 IIBH4W, IIBH1S, IIBH 2 & IIBH 3N, IVBH1S, & IVBH2S

See Section IV, Page 56: Compliance Assurance Monitoring (CAM)

Emission Point ID Number: 012 (Internally Vented)

Associated Equipment

Associated Emission Unit ID Number: P-012
Emissions Control Equipment ID Number: 012
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-012
Emission Unit Description: D802 Tumblast
Raw Material/Fuel: Metal
Rated Capacity: 6.26 ton/hr

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the following specified levels.

Pollutant: Opacity
Emission Limits: 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)
Emission Limits: 0.1gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a"

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 148 (Internally Vented)

Associated Equipment

Associated Emission Unit ID Number: P-148
Emissions Control Equipment ID Number: 148
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: P-148
Emission Unit Description: D753 New Sand Delivery
Raw Material/Fuel: Sand
Rated Capacity: 1.49 ton/hr

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the following specified levels.

Pollutant: Opacity
Emission Limits: 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)
Emission Limits: 0.1gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a"

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: [See Table Internally Vented & Fugitives](#)

Emission Unit Description

[Table Internally Vented & Fugitives](#)

Emission Point Number	Emission Unit Number	Emission Unit Description	Raw Material	Emission Source Type	Rated Capacity (ton/hr)
133	P-133	ML802 Ductile Iron Conversion	Metal	Internally Vented	11.42
146	P-146	D737 Pouring Floor	Metal	Fugitive	0.17
161	P-161	D775 New Sand Unload Station	Sand	Internally Vented	27.79
172	P-172	D850 Sand Transfer-Mud Dock	Sand	Fugitive	1.25
173	P-173	East Sand Pelletizer Loadout	Sand	Fugitive	1.25
3500 3501 3502 3503 3504 3505 3510 3511 3512 3514 3520 3521 3523 3524 3525 3526 3530 3531 3533 3534 3535 3536	P-183	D801 Bldg. 8001 Cooling Shed – 22 Exhaust	Metal	Fugitive	24.27

Table Internally Vented & Fugitives (continued)

Emission Point Number	Emission Unit Number	Emission Unit Description	Raw Material	Emission Source Type	Rated Capacity (ton/hr)
3125 3126 3127 3130 3135 3147	P-123A	ML801 Cooling Area-Pouring/Casting	Metal	Internally Vented	22.83
	P-123B	ML801 Casting Cooling Area	Metal	Fugitive	22.83
	P-126	ML801 Shakeout Casting Cooling	Metal	Internally Vented	22.83
3235 3236 3237 3240 3241 3242 3245 3249	P-132A	ML802 Cooling Area-Pouring	Metal	Internally Vented	11.42
	P-132B	ML802 Cooling Area-Casting	Metal	Fugitive	11.42
D808	P-242	D808 Sand Reclaim	Sand	Internally Vented	280.95
3000 3002 3003 3004 3005 3008 3009 3010 3011 3015 3016 3017 3018 3019 3020 3021 3022 3023 3200 3201	P-120B	D830 Iron Inoculation	Inoculate	Internally Vented	0.12
	P-120C	D830 Molten Metal Transfer	Metal	Fugitive	72.00
	P-120F	D830 Slag Loadout	Sand	Fugitive	72.00
D753	P-213	D753 Core	Solvent	Internally Vented	4.68E-3
D758	P-218	D785 Cold Box Core Cell	Solvent	Internally Vented	9.8E-4

Emission Point Number	Emission Unit Number	Emission Unit Description	Raw Material	Emission Source Type	Rated Capacity (ton/hr)
D737	P-220	D737 Core	Solvent	Internally Vented	2.35E-3

Applicable Requirements

Emission Limits For Internally Vented Sources (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from each emission point identified in Table Internally Vented & Fugitives shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limits: 40 %

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)

Emission Limits: 0.1gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a"

Emission Limits For Fugitive Sources (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from each emission point identified in Table Internally Vented & Fugitives shall not exceed the levels specified below.

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

IV. Compliance Assurance Monitoring (CAM)

Facility Name: John Deere Foundry Waterloo

Permit Number: 02-TV-012R1

CAM Plan for Baghouse-Controlled Sources (Exterior-Vented)

Table CAM-BH1

Emission Point Number	Emission Unit Number	Emission Unit Description	Control Equipment Number	IDNR Construction Permit Number
248	P-248	ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment	ML801BHA	97-A-139-S1
249			ML801BHB	97-A-138-S2
AlloyBH	P-120B-IF	Alloy Addition System	AlloyBH	99-A-349
MDDDBH1	MDD	Melt Didion Drum Rotary Sand Separator	MDDDBH1	05-A-422
MDDDBH2	MDD	Melt Didion Drum Rotary Sand Separator	MDDDBH2	05-A-423
CLRBH #1	P-009A	D850 Primary Blast Cabinet	CLRBH #1	94-A-582
CLRBH #2	P-010	D850 Core Knockout Cabinet	CLRBH #2	94-A-583-S2
CLRBH #3	P-011A	D850 Spotblast Cabinet	CLRBH #3	94-A-584-S2
SDSABH	P-162	D775 Sand Delivery Storage Area	CE-162	72-A-040-S3
IBH1E	P-031	ML802 Casting & Sand Grinding-System I	IBH1E	77-A-117-S5
IBH2			IBH2	77-A-118-S5
IBH3W			IBH3W	77-A-119-S5
IIBH1E	P-034	ML802 Casting & Sand Grinding-System II	IIBH1E	77-A-120-S6
IIBH2			IIBH2	77-A-121-S5
IIBH3			IIBH3	77-A-122-S5
IIBH4W			IIBH4W	77-A-123-S5
IIIBH1S	P-010A P-017	D853 Core Knockout Cab. Pts. D, E, F & G D853 Primary Blast Cabinet & Grinders	IIIBH1S	77-A-209-S6
IIIBH2			IIIBH2	77-A-210-S6
IIIBH3N			IIIBH3N	77-A-211-S6
IVBH1S	P-018 P-019 P-023	D853 Spotblast Cabinet-System IV	IVBH1S	77-A-207-S4
IVBH2S		D863 Reblast Cabinet-System IV D851 Tumbblast Machines-System IV	IVBH2S	77-A-208-S4

Pollutant Controlled: Opacity, Particulate Matter (PM), PM-10, Total Metal HAP

Applicable Requirements

See Iowa DNR Construction Permits listed in Table CAM-BH1

Monitoring Approach

General Monitoring Guidelines

- CAM involves the observation of control equipment compliance indicators, such as visible emissions and pressure drop. This plan defines acceptable ranges for these indicators. CAM also includes control equipment maintenance and inspections. Maintenance and inspections that will facilitate consistent control equipment operations are identified in this plan.
- Monitoring is not required during periods of time greater than one day in which the source does not operate.
- If weather prevents visible emission monitoring, the observer will note the weather conditions on the form used to record monitoring. If an observation is necessary to meet the required weekly monitoring, at least three attempts will be made to retake the observation throughout the day. If unsuccessful that day due to weather, an observation will be made the next day the weather permits.
- If light conditions prevent visible emission monitoring, the observer will note the light conditions and time of day on the form used to record monitoring. Under this circumstance, pressure readings will be made in place of visible observations of opacity.

Excursion from Compliance Indicators

- An excursion occurs when an observed compliance indicator is outside of its defined acceptable indicator range. An excursion does not necessarily indicate a deviation or violation of applicable permit terms, conditions, and/or requirements.
- John Deere Foundry Waterloo will take corrective action in accordance with the severity of the excursion. Corrective actions will begin as soon as possible, but no later than eight hours from the observation of the excursion. (Abnormal conditions discovered through equipment inspection and maintenance also require implementation of remediation within eight hours.)
- Corrective action will result in one of the following:
 - If corrective actions return the process and control equipment operations to normal, the excursion does not result in a monitoring deviation.
 - If corrective actions do not correct the excursion or no corrective action is taken, then a monitoring deviation results.
 - For visible emissions, if corrective action does not return the observation to no visible emission, a Method 9 observation is required to determine opacity.
 - If a Method 9 observation is made that exceeds the indicator opacity, then an indicator opacity exceedance has occurred. The indicator opacity for each emission point is listed in Table CAM-BH2.
 - In addition, if a Method 9 observation is made that exceeds the opacity permit limit, then a violation has also occurred.
- If corrective actions do not return the compliance indicator to its defined acceptable indicator range, John Deere Foundry Waterloo will perform the following follow-up actions, *as applicable*:
 - Continue corrective actions.
 - Promptly orally report the excursion to the IDNR central office (whether or not excursion from compliance indicator range is believed to have caused excess emission).
 - Promptly verbally report the indicator opacity exceedance, file a written indicator opacity exceedance report to both field office and central office (Compliance Unit) of IDNR.

- Promptly verbally report excess emissions to field office of IDNR (if due to other than startup, shutdown, or cleaning); within seven days of the excess emissions, file a written excess emissions report with both the field office and central office (Compliance Unit) of IDNR.
- Conduct source testing within 90 days of the excursion to demonstrate compliance.
 - If the test demonstrates compliance with the emission limit, John Deere Foundry Waterloo will determine new indicator ranges for monitoring.
 - If the test demonstrates noncompliance with the emission limit, John Deere Foundry Waterloo will, within 60 days, propose a schedule to implement corrective action to bring the source into compliance and conduct source testing to demonstrate compliance.
- Report monitoring or other deviations (operating conditions, emissions limits, or reporting requirements) in IDNR semi-annual monitoring and annual compliance certification reports.

Compliance Indicator Ranges

Visible Emissions: See Iowa DNR Construction Permits listed in Table CAM-BH2

Differential Pressure: See Table CAM-BH2

Table CAM-BH2

Emission Point Number	Emission Unit Number	Control Equipment Number	Differential Pressure Acceptable Indicator Range (1)	Type of Electronic Stack Emission Sensor (2)	Indicator Opacity (3)	IDNR Construction Permit Number
248	P-248	ML801BHA	4"-5" W.C.	CPM 750	N.V.E.	97-A-139-S1
249		ML801BHB	5"-6" W.C.	CPM 750	N.V.E.	97-A-138-S2
AlloyBH	P-120B-IF	AlloyBH	4"-6" W.C.	CPM 750	N.V.E.	99-A-349
MDDBH1	MDD	MDDBH1	2"-3" W.C.	CPM 750	N.V.E.	05-A-422
MDDBH2	MDD	MDDBH2	3"-5" W.C.	CPM 750	N.V.E.	05-A-423
CLRBH #1	P-009A	CLRBH #1	1.5"-2.5" W.C.	Triboguard	N.V.E.	94-A-582
CLRBH #2	P-010	CLRBH #2	1.5"-3.0" W.C.	Triboguard	N.V.E.	94-A-583-S2
CLRBH #3	P-011A	CLRBH #3	3"-6" W.C.	Triboguard	N.V.E.	94-A-584-S2
SDSABH	P-162	CE-162	4"-6" W.C.	Triboguard	N.V.E.	72-A-040-S3
IBH1E	P-031	IBH1E	2"-6" W.C.	Triboguard	N.V.E.	77-A-117-S5
IBH2		IBH2	2"-6" W.C.	Triboguard	N.V.E.	77-A-118-S5
IBH3W		IBH3W	2"-6" W.C.	Triboguard	N.V.E.	77-A-119-S5
IIBH1E	P-034	IIBH1E	2"-6" W.C.	Triboguard	N.V.E.	77-A-120-S6
IIBH2		IIBH2	2"-6" W.C.	Triboguard	N.V.E.	77-A-121-S5
IIBH3		IIBH3	2"-6" W.C.	Triboguard	N.V.E.	77-A-122-S5
IIBH4W		IIBH4W	2"-6" W.C.	Triboguard	N.V.E.	77-A-123-S5
IIIBH1S	P-010A P-017	IIIBH1S	2"-6" W.C.	Triboguard	N.V.E.	77-A-209-S6
IIIBH2		IIIBH2	2"-6" W.C.	Triboguard	N.V.E.	77-A-210-S6
IIIBH3N		IIIBH3N	2"-6" W.C.	Triboguard	N.V.E.	77-A-211-S6

Emission Point Number	Emission Unit Number	Control Equipment Number	Differential Pressure Acceptable Indicator Range (1)	Type of Electronic Stack Emission Sensor (2)	Indicator Opacity (3)	IDNR Construction Permit Number
IVBH1S	P-018	IVBH1S	2"-6" W.C.	Triboguard	N.V.E.	77-A-207-S4
IVBH2S	P-019 P-023	IVBH2S	2"-6" W.C.	Triboguard	N.V.E.	77-A-208-S4

(1) Differential Pressure Acceptable Indicator Range is measured in inches of water column (W.C.)

(2) CPM 750 is a light beam indicator. Triboguard is a triboelectric indicator.

(3) No Visible Emissions (N.V.E.)

Monitoring Methods

- Daily
 - Check for dust collector differential pressure.
- Weekly
 - Observe for visible emissions during material handling of unit. If a visible emissions reading cannot be made, record the differential pressure reading.
- Monthly
 - Inspect dust collector cleaning sequence.
 - Check hopper function and performance.
- Quarterly
 - Inspect bags for leaks and wear.
- Semi-Annually
 - Inspect all dust collector components that are not subject to wear or plugging, including structural components, housing, ducts and hoods.

Performance Criteria

Data Representativeness

An observation of visible emissions could indicate a decrease in the performance of the dust collector and an increase in particulate emissions. A differential pressure reading not within the acceptable indicator range could indicate performance by the dust collector and potentially an increase in particulate emissions.

Record Keeping and Reporting (Verification of Operational Status)

- John Deere Foundry Waterloo will maintain records of the following:
 - Daily logs of differential pressure readings.
 - Weekly logs of emissions observations.
 - All daily, monthly, quarterly, and semi-annually required inspections and maintenance. The date, time, and the location of the bag in relationship to the other bags must document bag replacement.
 - All corrective actions resulting from compliance indicators and inspections and maintenance.
 - Excursion, indicator opacity exceedence, and excess emissions reports.
- Records will be kept for at least five (5) years and be available to the IDNR upon request.

Quality Control

- The dust collectors and their monitoring equipment will be operated and maintained according to manufacturer recommendations and/or as outlined in the above monitoring requirements.
- John Deere Foundry Waterloo will maintain an adequate inventory of spare parts.

Data Collection Procedures

- Manual log entries are made based on gauge readings and the observation (or not) of visible emissions.
- Maintenance personnel record all maintenance/inspection performed on the dust collector and actions resulting from the inspection.

Justification

Selection of Compliance Indicators

Visible emissions and differential pressure readings were selected as performance indicators, because they demonstrate the dust collector's function of collecting particulate matter (effectiveness of cleaning cycle, loose or collapsed bag, etc.). How well the dust collector collects particulate matter will demonstrate the likelihood of compliance with applicable requirements.

Selection of Compliance Indicator Ranges

The ranges selected are a reflection of both historical normal operation measurements for the indicators and manufacturer recommendation for the indicators.

Authority for Requirement: 567 IAC 22.108(3)

V. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105(2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108(1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108(14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108(9)"b"*

G2. Permit Expiration

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, four or more copies of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107(4)*

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides

for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108(15)"e"*

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108(5)*

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
 - a. Form 1.0 "Facility Identification";
 - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
 - c. Form 5.0 "Title V annual emissions summary/fee"; and
 - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
 - a. Form 1.0 "Facility Identification";
 - b. Form 5.0 "Title V annual emissions summary/fee";
 - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108(15)"b"*

G8. Duty to Provide Information

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108(9)"e"*

G9. General Maintenance and Repair Duties

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:

- a. The date, place and time of sampling or measurements
- b. The date the analyses were performed.
- c. The company or entity that performed the analyses.
- d. The analytical techniques or methods used.
- e. The results of such analyses; and
- f. The operating conditions as existing at the time of sampling or measurement.
- g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)

2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:

- a. Comply with all terms and conditions of this permit specific to each alternative scenario.
- b. Maintain a log at the permitted facility of the scenario under which it is operating.
- c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

G11. Evidence Used in Establishing That a Violation Has or Is Occurring

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

- a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
- b. Compliance test methods specified in 567 Chapter 25; or
- c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

- a. Any monitoring or testing methods provided in these rules; or
- b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a

violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.

- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

- a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.

- b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
- c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
- d. The changes are not subject to any requirement under Title IV of the Act.
- e. The changes comply with all applicable requirements.
- f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
 - i. A brief description of the change within the permitted facility,
 - ii. The date on which the change will occur,
 - iii. Any change in emission as a result of that change,
 - iv. The pollutants emitted subject to the emissions trade
 - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
 - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
 - vii. Any permit term or condition no longer applicable as a result of the change.

567 IAC 22.110(1)

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*

3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*

5. Aggregate Insignificant Emissions. The permittee shall not construct, establish or operate any new insignificant activities or modify any existing insignificant activities in such a way that the emissions from these activities no longer meet the criteria of aggregate insignificant emissions. If the aggregate insignificant emissions are expected to be exceeded, the permittee shall submit the appropriate permit modification and receive approval prior to making any change. *567 IAC 22.103(2)*

6. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

- a. An administrative permit amendment is a permit revision that is required to do any of the following:
 - i. Correct typographical errors
 - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
 - iii. Require more frequent monitoring or reporting by the permittee; or
 - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
- b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
- c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Permit Modification.

- a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
 - i. Do not violate any applicable requirements
 - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
 - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
 - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
 - v. Are not modifications under any provision of Title I of the Act; and
 - vi. Are not required to be processed as significant modification.
- b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
 - i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
 - ii. The permittee's suggested draft permit
 - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and

iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. *567 IAC 22.111-567 IAC 22.113* The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.105(1)"a"(4)*

G19. Duty to Obtain Construction Permits

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. *567 IAC 22.1(1)*

G20. Asbestos

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when conducting any renovation or demolition activities at the facility. *567 IAC 23.1(3)"a", and 567 IAC 23.2*

G21. Open Burning

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. *567 IAC 23.2 except 23.2(3)"h"; 567 IAC 23.2(3)"h" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
 - b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
 - c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
 - d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
 - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
 - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
 - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15th, 2001.
 - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a"*, *567 IAC 22.108(17)"b"*
3. A permit shall be reopened and revised under any of the following circumstances:
 - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;
 - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
 - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
 - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
 - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

G25. Permit Shield

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements included in this permit as of the date of permit issuance.

This permit shield shall not alter or affect the following:

1. The provisions of section 303 of the Act (emergency orders), including the authority of the administrator under that section;
2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Act;
4. The ability of the department or the administrator to obtain information from the facility pursuant to section 114 of the Act. *567 IAC 22.108(18)*

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108(8)*

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108(9)"d"*

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111(1)"d"*

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may

submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.

567 IAC 26.1(1)

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits
EPA Region 7
Air Permits and Compliance Branch
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau

Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1

909 West Main – Suite 4
Manchester, IA 52057
(563) 927-2640

Field Office 2

P.O. Box 1443
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

Field Office 3

1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

Field Office 4

1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

Field Office 5

401 SW 7th Street, Suite I
Des Moines, IA 50309
(515) 725-0268

Field Office 6

1004 W. Madison
Washington, IA 52353
(319) 653-2135

Polk County Public Health Dept.

Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

Linn County Public Health Dept.

Air Pollution Control Division
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

VI. Appendix A: John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan

Record Keeping and Reporting:

Maintenance records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources.

Authority for Requirement: 567 IAC 22.108(3)"b"

Periodic Monitoring is not required during periods of time greater than one day in which the source does not operate.

The following table correlates the equipment numbers in the JDFW Maintenance Plan with Title V emission point numbers.

JDFW Equipment Number	Title V Emission Point Number	Title V Emission Unit Number	Emission Unit Description
416-11-A1936	248	P-248	ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment
416-11-A1971	249		
410-PD-A0382	CLRBH #1	P-009A	D850 Primary Blast Cabinet
410-PB-A0375	CLRBH #2	P-010	D850 Core Knockout Cabinet
410-PA-A1061	CLRBH #3	P-011A	D850 Spotblast Cabinet
416-11-A2051	IFBH	P-3IF	Induction Furnaces (3)
416-06-A2732	IBH1E	P-031	ML802 Casting & Sand Grinding-System I
416-06-A2735	IBH2		
416-06-A2738	IBH3W		
416-06-A2741	IIBH1E	P-034	ML802 Casting & Sand Grinding-System II
416-06-A2744	IIBH2		
416-06-A2747	IIBH3		
416-06-A2750	IIBH4W		
416-07-A1780	IIIBH1S	P-010A	D853 Core Knockout-System III D853 Primary Blast Cabinet
416-35-A1890	IIIBH2	P-017	
416-35-A1891	IIIBH3N		
416-06-A2869	IVBH1S	P-018	D853 Spotblast Cabinet-System IV D863 Reblast Cabinet-System IV D851 Tumblast Machines-System IV
416-06-A2872	IVBH2S	P-019	
		P-023	

John Deere Foundry Waterloo

**Air Pollution Control Device
Preventive Maintenance Plan**

Revised 3-27-2002

John Deere Foundry Waterloo Preventive Maintenance of Environmental Control Equipment

Objective

The objective of our environmental control equipment preventive maintenance program is to maintain all environmental control equipment in such a way as to maximize performance and minimize any emissions.

The key elements to our program are Electronic Monitoring, Routine Preventive Maintenance and Major Preventive Maintenance.

Electronic Monitoring

Approximately 50% of our externally exhausted dust collectors are equipped with electronic stack emission sensors. These sensors detect particulate discharge and alarm, or in some cases shut down, all or part of the collector. We use two types of stack sensors. One is a probe style sensor that uses triboelectric current to sense particles impacting or passing close to the probe. The other is a continuous particulate monitor that uses a light beam to detect moving particles in the airstream.

The stack emissions sensor is a reactive measure. In addition, we utilize electronic monitoring of the collector differential pressure to give us a continuous reading of the overall collector operation and condition. With differential pressure monitoring and control, we can take a proactive look at what is happening inside the collector. Differential pressure is the heartbeat of the collector. Once the collector operating range has been established, changes in the differential pressure above or below the normal operating range is investigated as a potential indicator of a developing problem. These changes can result from a problem in the cleaning system such as a blown diaphragm in a pulse cleaning valve, a bag down, buildup of material in the discharge hopper or a change in the material being filtered by the collector. The high/low settings on our monitoring equipment allows us to react and correct the problem, thus preventing damage to a filter bag or cartridge.

Routine and Major Preventive Maintenance

To be sure we achieve our objective, we must complement our electronic monitoring with an effective preventive maintenance inspection and repair program. We categorized this inspection as routine and major. The routine preventive maintenance parallels the electronic monitoring. The major inspection is where we open up the collector and do a very complete inspection and on-the-spot repair of the unit.

Our preventive maintenance inspection program is a computer-based program which is automatically generated based on the yearly calendar. Preventive maintenance inspection work orders are generated from this system on a weekly, monthly, quarterly or semi-annual basis. Copies of each preventive maintenance work order for our environmental preventive maintenance program are presented in the sections that follow. The frequencies of inspections are based upon manufacturer's recommendation and equipment performance and reliability. The inspections require the signature of the trades person performing the work and his or her supervisor upon completion. All completed environmental preventive maintenance inspection

forms and follow-up work orders will be filed and kept for a three-year period in the maintenance area.

To minimize the amount and duration of any excess emissions, we have implemented a Dust Collector Stack Emissions Alarm Procedure which is posted at each collector control panel. Copies of this procedure are included in the following sections. To expedite response time and corrective action, our skilled trades employees and their respective supervisors have been given the authority to shut down operations associated with such emissions.

To take our program one step further, we have established a visual preventive maintenance inspection route in which all of our dust collection control equipment exhaust stacks will be looked at each day.

The following manual contains a listing of our dust collection control equipment required by Title V. A set of General Procedures gives an overview of the PM information for the various collector types. Following these are copies of the preventive maintenance inspection forms which also describe the schedule frequency for each collector. Following the sections with the inspection forms is a repair parts listing of items maintained in inventory for the dust collectors.

John Deere Foundry Waterloo
Maintenance – Standard Procedure

1 June 1998

Standard Operating Procedure Preventive Maintenance Instructions for John Deere Foundry Equipment

Scope

This procedure pertains to scheduled preventive maintenance instructions for John Deere Foundry facilities and equipment maintenance.

Purpose

To provide guidelines for generation, distribution and execution of scheduled preventive maintenance instructions (P.M.s) for foundry equipment to ensure that foundry equipment is inspected and maintained to perform to desired specifications.

General

Preventive maintenance instructions are generated by the system at a frequency determined by Mechanical Services. The maintenance management system program resides on and is owned by Waterloo Operations Systems. Mechanical Services is the owner of the information on the system which pertains to Foundry equipment. The information is maintained live and current on the system by the Engineering Analysts and Planners within Mechanical Services.

P.M.s are generated with a unique work order number and a due date for completion. These instructions are delivered to the skilled trades person for completion. When the skilled trades person completes the work, he or she acknowledges through the payroll system that the work has been done. A record of this completion is retained on the system.

Definitions

P.M.s are categorized as four different types to comply with different operational requirements of our facility. The Categories are Normal or Routine, OSHA, Environmental Control Equipment and Process Control Equipment. All category types are generated and maintained on the system the same manner. The differences are in the documentation requirements.

Normal or Routine

- These P.M.s do not require special treatment. They are generated, completed and a record verifying completion is retained on the system.

OSHA

- OSHA P.M.s are inspections that are performed on equipment for which OSHA has identified a legal need for routine inspection and maintenance. These P.M.s are developed and generated on the system the same as the normal P.M.s, but OSHA requires that we retain the actual P.M. instruction with the skilled trades person and

his or her supervisor's signatures for five years as proof performance. These hard copies are filed in the Mechanical Services office.

Environmental

- Environmental P.M.s are inspections generated as a result of our Environmental Control Equipment Maintenance Plan developed for the IDNR. These P.M.s are also developed, generated and maintained on the system but IDNR requires that we retain the actual P.M. instruction with the signatures of the skilled trades person, his/her supervisor and the Engineering Analyst maintaining the inspection programs for five years as proof performance. In addition to the P.M. instruction all work orders generated from this inspection must be completed, signed and retained with the completed instruction. These hard copies are filed and maintained by the Engineering Analyst responsible for P.M. and inspection in the Mechanical Services office.

Process

- Process P.M.s are instructions generated for process equipment at the request of the process engineer. These instructions provide space for recording data. They are completed, signed by the craftsperson and given to or filed for the requesting Process Engineer.

P.M. Instructions

Work Responsibility:

Action:

Establish P.M. Instructions

Plant Engineers
Maintenance Supervisors
Engineering Analysts
Process Engineer

1. P.M inspection instructions are established for equipment at the time of the initial purchase. The inspection instructions are based upon manufacturer's recommendations and in house experience for like equipment.

Engineering Analyst

2. A unique brass tag (asset number) is assigned to the equipment and the inspection and lubrication information is inputted into the Maintenance Management System (M.A.I.N).

3. Each P.M. instruction is coded to provide information to M.A.I.N so automatic generation will execute at the desired frequency. Examples: weekly, bi-weekly, monthly, bi-monthly, quarterly, semi-annually and annually.

4. Each P.M. instruction is assigned a category code for type tracking purposes. Category 01 is a Normal or Routine Inspection assigned to a maintenance employee; Category 06 is an inspection performed by the P.M. and inspection team; Category 09 is an environmental inspection; Category 10 is an OSHA inspection.

Preventive Maintenance Scheduling and Execution

Engineering Analyst
Maintenance Planner

1. The computer-generated hard copies of the P.M. instructions are sorted and distributed to the proper maintenance craftsman for completion. The computer automatically adds the P.M. instruction and its unique work order to the craftsman's work schedule.

Maintenance Craftsman

2. The craftsman performs the inspection and completes the information requested on the instruction sheet. If during the inspection a deficiency is found which can not be corrected at that time, the craftsman will write a work order for the task to be completed. He/she will sign the hard copy signifying that the inspection has been completed.

Maintenance Craftsman
Maintenance Supervisor

3. Work orders written during the inspection will be automatically entered on the area craftsman's work schedule. When the work order is completed the craftsman will indicate as he/she reports labor that the work has been completed. This will then close out the work order.

Maintenance Craftsman
Maintenance Supervisor
Engineering Analyst

4. The hard copy of the preventive maintenance instruction for all environmental control equipment must be completed and signed by the craftsman and his or her supervisor. This P.M. inspection must then be filed as proof of performance.

5. The hard copy of the preventive maintenance instruction for all environmental control equipment must be completed and signed by the craftsperson, his or her supervisor and the engineering analyst responsible for P.M. and inspections. This P.M inspection must then be filed as proof of performance. All work orders generated from the environmental inspection must be completed, signed and filed with the signed inspection hard copy.

John Deere Foundry Waterloo Operations and Maintenance Plan
Agency Approved Dust Collectors

JDFW Equipment Number	Title V Emission Point Number	Title V Emission Unit Number	Emission Unit Description
416-11-A1936	248	P-248	ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment
416-11-A1971	249		
416-07-A1780	CLRBH #1	P-009A	D850 Primary Blast Cabinet
416-35-A1890	CLRBH #2	P-010	D850 Core Knockout Cabinet
416-35-A1891	CLRBH #3	P-011A	D850 Spotblast Cabinet
416-11-A2051	IFBH	P-3IF	Induction Furnaces (3)
416-06-A2732	IBH1E	P-031	ML802 Casting & Sand Grinding-System I
416-06-A2735	IBH2		
416-06-A2738	IBH3W		
416-06-A2741	IIBH1E	P-034	ML802 Casting & Sand Grinding-System II
416-06-A2744	IIBH2		
416-06-A2747	IIBH3		
416-06-A2750	IIBH4W		
416-06-A2865	IIIBH1S	P-010A	D853 Core Knockout-System III D853 Primary Blast Cabinet
416-06-A2862	IIIBH2	P-017	
416-06-A2859	IIIBH3N		
416-06-A2869	IVBH1S	P-018	D853 Spotblast Cabinet-System IV D863 Reblast Cabinet-System IV D851 Tumbblast Machines-System IV
416-06-A2872	IVBH2S	P-019	
		P-023	

John Deere Foundry Waterloo
Preventive Maintenance of Environmental Control Equipment

General Procedure – Carborundum, BACT and ETA Dust Collectors (Bag-type, pulse clean)

<u>801 Mold</u>	<u>802 Mold</u>	<u>Melt</u>	<u>Cleaning Room</u>
41611A1936	41606A2732	41611A2051	41606A2859
41611A1971	41606A2735		41606A2862
	41606A2738		41606A2865
	41606A2741		41606A2869
	41606A2744		41606A2872
	41606A2747		
	41606A2750		

Electronic Monitoring

Due to the reliability and performance of the 802 mold line collectors, we have not equipped them with stack monitors. These units are very reliable and our preventive maintenance and inspection program has been very successful in maintaining their performance.

The cleaning room units and the ETA units on 801 are equipped with continuous electronic monitoring for stack emissions and collector differential pressure. If either sensor reaches its alarm point, an alarm is sent to CC&M where security notifies maintenance and corrective action is taken (see “Dust Collector Stack Emissions Alarm Procedure”). If the alarm continues, the unit will automatically shut down until the problem is corrected, preventing stack emissions or premature damage to the bags. The Furnace ETA and 801 (Outside) ETA baghouses are compartmentalized. Each compartment is monitored electronically. If a dust leak is detected, the problem compartment is automatically isolated from the system. Inlet and outlet dampers will close, shutting down the problem compartment.

Routine Maintenance

Visual observations are made periodically to verify that the air exhausted by the collector is clean to the eye. If there are indications of dirty air, the Stack Emissions Alarm Procedure is put into effect.

Differential pressures are monitored so that changes from the norm can be recognized. Changes in this differential pressure are early indications of collector cleaning problems. Early correction can prevent bag damage. Our collectors may operate within different ranges due to the particulate size and loading. These ranges are specified on the individual collector’s scheduled PM. Typically, these collectors operate within a range of 3”-6”.

The pulse cleaning system is monitored to ensure that there are no air leaks and it is sequencing properly to keep the differential within range. The diaphragm valves are checked by listening for constant airflow through the pulse tubes and by checking to insure that full-regulated line pressure returns after each cycle.

While the unit is in operation, the trades person listens for leaks around the inspection panels and door seals. Work orders are written for potential problems and the repair is scheduled for the off-shift repair crew.

Major Preventive Maintenance

Major preventive maintenance is performed monthly, quarterly, semi-annually or annually depending on the severity of the environment and the history of the equipment reliability.

Blacklight

Prior to shutting the unit down for this inspection, ½ lb./1000 ft² of cloth area of dye is fed into an exhaust duct and ran through the collector. The clean air compartment doors are opened and the area around each bag venturi is inspected with a blacklight for traces of dye residue. If any dye is found, the bag is replaced with a new one. The tube sheets are also inspected for cracks with the blacklight. If cracks are found, the bags around the area of the crack are removed, the crack repaired, and the bags are put back in place.

Cleaning and Monitoring

Check to see that the pulse tubes are mounted securely over the bag rows and the individual pulse outlets are not plugged. Check for blown diaphragms in the pulse valves. Check the stack monitors to verify their operation and sensitivity.

Structure/Auxiliary Equipment

Inspect the screw conveyors, drive reducers, belts, bearings and sheaves to insure reliable operation. The rotary air locks and drives are inspected to insure good condition and operation. Inspect blower drive belts, sheaves, motor bases and shaft bearings to insure reliable operation. Motor and fan bearing temperatures are monitored through the control panel. The collector shell, duct connections and dust hoppers are inspected for cracks and leaks.

John Deere Foundry Waterloo
Preventive Maintenance of Environmental Control Equipment

General Procedure – BACT and Exijet Dust Collectors (Cartridge-type, non-recirculating)

Cleaning Room

41607A1780
41635A1890
41635A1891

Electronic Monitoring

These three cleaning room units are equipped with continuous electronic monitoring for stack emissions and collector differential pressure. If either sensor reaches its alarm point, an alarm is sent to CC&M where security notifies maintenance and corrective action is taken (see “Dust Collector Stack Emissions Alarm Procedure”). If any collector differential pressure alarm continues, the unit will automatically shut down until the problem is corrected to prevent premature damage to the cartridges.

Routine Maintenance

Visual observations are made periodically to verify that the air exhausted by the collector is clean to the eye. If there are indications of dirty air, the Stack Emissions Alarm Procedure is put into effect.

Differential pressures are monitored so that changes from the norm can be recognized. Changes in this differential pressure are early indications of collector cleaning problems. Early correction can prevent cartridge damage. Our collectors may operate within different ranges due to the particulate size and loading. These ranges are specified on the individual collector’s scheduled PM. Typically, the BACT collector operates within a range of 1”-2.5”. Exijet #2 operates within a range of 1.5”-3” and Exijet #3 operates within a range of 3”-6”.

The pulse cleaning system is monitored to ensure that there are no air leaks and it is sequencing properly to keep the differential within range. The diaphragm valves are checked by listening for constant airflow through the pulse tubes and by checking to insure that full-regulated line pressure returns after each cycle.

While the unit is in operation, the trades person listens for leaks around the inspection panels and door seals. Work orders are written for potential problems and the repair is scheduled for the off-shift repair crew.

Major Preventive Maintenance

Major preventive maintenance is performed monthly, quarterly, semi-annually or annually depending on the severity of the environment and the history of the equipment reliability.

Blacklight

Prior to shutting the unit down for this inspection, ½ lb./1000 ft² of cloth area of dye is fed into an exhaust duct and ran through the collector. The clean air compartment doors are opened and the area around each cartridge venturi is inspected with a blacklight for traces of dye residue. If any dye is found, the cartridge is replaced with a new one. The tube sheets are also inspected for cracks with the blacklight. If cracks are found, the cartridges around the area of the crack are removed, the crack repaired, and the cartridge are put back in place.

Cleaning and Monitoring

Check to see that the pulse tubes are mounted securely over the cartridge rows and the individual pulse outlets are not plugged. Check for blown diaphragms in the pulse valves. Check the stack monitors to verify their operation and sensitivity.

Structure/Auxiliary Equipment

Inspect the screw conveyors, drive reducers, belts, bearings and sheaves to insure reliable operation. The rotary air locks and drives are inspected to insure good condition and operation. Inspect blower drive belts, sheaves, motor bases and shaft bearings to insure reliable operation. The collector shell, duct connections and dust hoppers are inspected for cracks and leaks.

DUST COLLECTOR STACK **EMISSIONS ALARM** **PROCEDURE**

IF A COLLECTOR STACK SENSOR HAS GONE INTO ALARM, ATTEMPT TO RESET THE ALARM AND CHECK THE STACK FOR VISIBLE EMISSIONS

VISUALLY OBSERVE THE STACK FOR A MINIMUM OF FIVE MINUTES OR THROUGH ONE CLEANING CYCLE

IF THERE ARE NO VISIBLE EMISSIONS, AND ALARM RESETS, RESUME OPERATIONS

IF THE ALARM WILL NOT RESET OR OCCURS MORE THAN (3) TIMES DURNING AN OPERATING SHIFT, ISSUE A WORK ORDER TO DYE CHECK THE COLLECTOR TO VERIFY THERE ARE NO LEAKING BAGS

IF THERE ARE VISIBLE EMISSIONS THAT CANNOT BE STOPPED BY ISOLATION, SHUT

**THE COLLECTOR DOWN UNTIL NECESSARY
REPAIRS ARE MADE**

John Deere Foundry Waterloo

OSHA/Environmental PMs

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

BM801517

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41611A1936 DEP LOC: 801 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 801 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF:

CATEGORY:09

ETA DUST COLLECTOR INSPECTION **ENVIROMENTAL-SHIELDS**

ETA DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

801 COLLECTOR 41611A1936

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 4" - 5" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
- A. LISTEN FOR BLOWN DIAPHRAGMS _____
- B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 65 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE _____
- DYECHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____
- CHECK OPERATION OF AIR DRYER _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

BT801504

SEQ: 030 EST HRS: 1.0

EQUIPNO: 41611A1936 DEP LOC: 801 FREQ: RM 2 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 801 ACCT CHG: 00046525 LAST SCHED: 20020304 LAST PERF:

CATEGORY:09

801 MAINTENANCE-ETA COLLECTOR **AREA C - KELLER**

801 MAINTENANCE

MONTHLY:

- CHECK AND ADJUST SIDE WALL SCRAPER SO HARD PAN IS NO MORE THAN 1/8" THICK
- CHECK DUST CONVEYOR BELT FOR PROPER ALIGNMENT ADJUST AND CLEAN IF NECESSARY
- CHECK TO MAKE SURE AUTO LUBRICATION SYSTEM IS WORKING AND GREASE IS FULL

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFW0080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

BM801501 SEQ: 010 EST HRS: 3.0

EQUIPNO: 41611A1971 DEP LOC: 801 FREQ: RM 1A 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 801 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF:

CATEGORY:09

**ENVIRONMENTAL GROUP PM FOR MONTHLY INSPECTION*SHIELDS*

* THIS WORK ORDER GOES TO ENVIRONMENTAL *

* GROUP!!!!!!!!!!!!!! *

ETA DUST COLLECTOR FOR 801 MOLD LINE

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DUST COLLECTOR DIFFERENTIAL SHOULD BE 5"-6" MAX. _____
- CHECK CLEANING CYCLE IS RUNNING PROPERLY _____
- LISTEN FOR BLOWN PURGE VALVES _____
- REGULATE AIR PRESSURE, SET AT 65-70 PSI (UNDER ALARM) _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FAN BLOWER MOTOR AND FAN FOR UNUSUAL NOISES OR VIBRATION _____
- GREASE SCREW CONVEYOR BEARINGS _____
- CHECK LEVEL PROBES IN DUST COLLECTOR HOUSING HOPPERS _____
- VISUALLY INSPECT TUBE SHEET FOR CRACKS, RUST, OR LEAKAGE _____
- VISUAL CHECK FOR DUST LEAKS IN COLLECTOR HOUSINGS _____
- VISUAL CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- VISUAL CHECK OF ROTARY VALVES AND DRIVES ON SCREW CONVEYORS _____
- VISUAL CHECK OF CONDITION SCREW CONV. AND HANGER BEARINGS, REPLACE IF NECESSARY _____
- VISUAL CHECK CONDITION OF BUCKET ELEVATOR BEARINGS LOWER AND UPPER. CHECK BELT TENSION OF REDUCER. TIGHTEN DRIVE BELTS PER MANUAL AND GREASE TOP BEARINGS ACCORDING TO SCHEDULE. _____
- VISUAL CK CONDITION OF PULSE BLOW PIPES TO CLEAN FILTER BAGS. CK POSITION ABOVE BAG CONNECTION ON MANIFOLD, ETC. _____
- VISUAL CHECK FOR EVIDENCE OF LEAKING BAGS, TUBE SHEET CRACKS OR LEAKS OF ANY ACCUMULATION OF DUST ON CELL PLATE. _____
- DYE/CHECK/BLACKLIGHT INSPECTION IF ALARM CONDITION PRESENT OR EVIDENCE OF DUST ON TUBE SHEET _____
- VISUAL CHECK OF CONDITION OF INLET AND DAMPER FOR SEALING WHEN CLOSED, ADJUST ACTUATOR AS NECESSARY. SEE MANUAL. _____
- CHECK CONDITION OF BLOWER, VIBRATION AND TEMPERATURES OF BEARINGS. _____

COMPLETE THE FOLLOWING IN JANUARY AND JUNE:

- CLEAN AND REPACK FAN BEARINGS AS REQ'D, GREASE #350-13-566-12 PACK BRGS ONLY TO BOTTOM OF FAN SHAFT. _____

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS
(SORTED BY PM SCHEDULE NUMBER)
HH850500 SEQ: 010 EST HRS: 1.0
EQUIPNO: 41607A1780 DEP LOC: 850 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740
DEPT CHG: 850 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950707
CATEGORY:09
#1 BACT COLLECTOR INSPECTION

BACT DUST COLLECTOR CARTRIDGE TYPE NON RECIRCULATE PULSE CLEAN
#1 BACT DUST COLLECTOR CLEANING ROOM 41607A1780

WEEKLY: FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 1.5" - 2.5" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK FOR WORN OR DAMAGED CARTRIDGES, EVIDENCE OF LEAKS, DUST
ACCUMULATING ON CLEAN AIR SIDE _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING CARTRIDGES _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

HH850501

SEQ: 020 EST HRS: 1.0

EQUIPNO: 41635A1890 DEP LOC: 850 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 850 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950522

CATEGORY:09

#2 EXIJET COLLECTOR INSPECTION

EXIJET DUST COLLECTOR CARTRIDGE TYPE NONRECIRCULATE PULSE CLEAN

#2 EXIJET DUST COLLECTOR CLEANING ROOM 41635A1890

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 1.5" - 3" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. GENERATED AIR PRESSURE TO BE SET AT A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK FOR WORN OR DAMAGED CARTRIDGES, EVIDENCE OF LEAKS, DUST
ACCUMULATING ON CLEAN AIR SIDE _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING CARTRIDGES _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

HH850502

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41635A1891 DEP LOC: 850 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 850 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950522

CATEGORY:09

#3 EXIJET COLLECTOR INSPECTION

EXIJET DUST COLLECTOR CARTRIDGE TYPE NONRECIRCULATE PULSE CLEAN

#3 EXIJET DUST COLLECTOR CLEANING ROOM 41635A1891

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 3" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. GENERATED AIR PRESSURE TO BE SET AT A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK FOR WORN OR DAMAGED CARTRIDGES, EVIDENCE OF LEAKS, DUST
ACCUMULATING ON CLEAN AIR SIDE _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING CARTRIDGES _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

AM830501

SEQ: 010 EST HRS: 2.0

EQUIPNO: 41611A2051 DEP LOC: 830 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 830 ACCT CHG: 00046025 LAST SCHED: LAST PERF:

CATEGORY:09

ETA DUST COLLECTOR MELT FURNACE WEEKLY INSP **TOMPKINS**

ETA DUST COLLECTOR - 200,000 ACFM

DAILY:

FOLLOWUP REQUIRED YES/NO

MIXER PELLETIZER:

- CHECK QUALITY OF DUST LEAVING MIXER, SHOULD BE NON-DUSTING IN CONSISTENCY. _____
- CHECK LEVEL OF DUST IN SILO, DUST MIXER & DUST TOTE FOR PROPER OPERATION _____

DUST COLLECTOR SYSTEM:

- CHECK DUST COLLECTOR DIFF PRESSURE, SHOULD BE 4" - 6" MAX _____

WEEKLY:

FOLLOWUP REQUIRED YES/NO

MIXER PELLETIZER:

- CHECK & ADJUST SIDE-WALL SCRAPER SO HARDPAN IS NO MORE THAN 1/8" THICK. _____
- CHECK AIR LINE LUBRICATORS IN MIXER ROOM FOR OIL, FILL IF NECESSARY. _____
- CHECK DUST CONVEYOR BELT FOR PROPER ALIGNMENT, ADJUST & CLEAN IF NECESSARY. _____
- CHECK AUTO LUBRICATION ON MIXER PELLETIZER-USE LOW TEMP LUBE #350-13-566-10, 35LB PAIL. MANUALLY CHECK FOR GREASING. _____
- GREASE FAN BEARINGS WITH SHC-32 350-13-565-33 (2 PUMPS). _____

HANKISON AIR DRYER:

- CHECK DEW POINT MOISTURE INDICATOR, SHOULD BE GREEN. _____
- CHECK INDICATING LIGHTS ARE ILLUMINATED. _____
- CHECK TOWER PRESSURE READING. OFF-LINE TOWER SHOULD READ 2 PSIG OR LESS. IF PRESSURE EXCEEDS 2-3 PSI, REPLACE MUFFLER ELEMENTS. _____
- CHECK FOR ALARM CONDITIONS. _____
- CHECK FOR OIL OR HIGH MOISTURE PRESENCE AFTER DRYER. _____

DUST COLLECTOR:

- CHECK DUST COLLECTOR DIFFERENTIAL PRESSURE, SHOULD BE 4"-6" MAX. _____
- CHECK CLEANING CYCLE IS RUNNING PROPERLY. CHECK OPERATIONAL MANUALS FOR SEQUENCE OF OPERATION. _____
- LISTEN FOR BLOWN PURGE VALVES. _____
- REGULATE AIR PRESSURE, SET AT 65-70 PSIG. _____

COMPLETED BY _____ DATE _____ APPROVED _____

DATE INSPECTED _____ INSPECTED BY _____ PASS __ FAIL __

ADDITIONAL WORK REQUIRED: _____

REVIEWED BY _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

AM830502

SEQ: 010 EST HRS: 3.0

EQUIPNO: 41611A2051 DEP LOC: 830 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 830 ACCT CHG: 00046025 LAST SCHED: LAST PERF:

CATEGORY:09

ETA DUST COLLECTOR MELT FURNACE MONTHLY INSP **TOMPKINS**

ETA DUST COLLECTOR - 200,000 ACFM

MONTHLY:

FOLLOWUP REQUIRED YES/NO

DUST COLLECTOR, SCREW CONVEYORS, SILO DUST COLLECTOR, ELEVATOR:

- CHECK LEVEL PROBES IN DUST COLLECTOR HOUSING HOPPERS _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY VALVES & DRIVES ON SCREW CONVEYORS _____
- CHECK CONDITION OF SCREW CONVEYORS & HANGER BEARINGS, REPLACE AS NECESSARY _____
- CHECK CONDITION OF BUCKET ELEVATOR BEARINGS LOWER & UPPER, CHECK BELT TENSION OF REDUCER. TIGHTEN DRIVE BELTS PER MANUAL & GREASE TOP BEARINGS ACCORDING TO SCHEDULE. _____
- CHECK CONDITION OF PULSE BLOW PIPES USED TO CLEAN FILTER BAGS, CHECK CONNECTION TO BLOW PIPE MOUNTED ON MANIFOLD _____
- CHECK CONDITION OF INLET & DAMPER FOR SEALING WHEN CLOSED, ADJUST ACTUATOR AS NECESSARY - SEE MANUAL _____
- CHECK CONDITION OF BLOWER, VIBRATION & TEMPERATURE OF BEARINGS. _____
- REPACK FAN BEARINGS, AS REQ'D, USE MOBIL TEMP SHC-32, SEMI-ANNUAL FOR REPACKING FAN BEARINGS (JAN AND JUN) STOCK # 350-13-565-33, PACK BEARINGS ½" BELOW BOTTOM OF FAN SHAFT. _____

MIXER PELLETIZER - LANCASTER:

- CHECK TURBO MIXER BLADES & WALL SCRAPER BLADES, REPLACE AS NECESSARY _____
- CHECK FOR LEAKING SEALS IN ACCESS DOOR _____
- CHECK EXHAUST DUCTWORK CONNECTED TO MIXER FOR PLUGGING, CLEAN AS NECESSARY _____
- CHECK & CLEAN MIXER DISCHARGE DOOR & RAILS _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802510

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2732 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF:

CATEGORY:09

INSPECTION-#1 DUST COLLECTOR SYSTEM**SHEILDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 1 COLLECTOR 41606A2732

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802511

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2735 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950612

CATEGORY:09

INSP #1 DUST COLLECTOR SYS-#2 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 2 COLLECTOR 41606A2735

WEEKLY:

FOLLOWUP REQUIRED YES/NO

▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____

▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____

A. LISTEN FOR BLOWN DIAPHRAGMS _____

B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____

▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____

▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____

▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____

▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE _____

▪ DYE/CHECK/BLACKLIGHT INSPECTION _____

▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____

▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____

▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____

▪ CHECK BLOWER DRIVE BELTS, SHEAVES _____

▪ CHECK MOTOR, BEARINGS AND MOUNT BASE _____

▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____

▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802512

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2738 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950612

CATEGORY:09

INSP #1 DUST COLLECTOR SYS-#3 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 3 COLLECTOR 41606A2738

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO
BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS
(SORTED BY PM SCHEDULE NUMBER)
CM802513 SEQ: 010 EST HRS: 1.0
EQUIPNO: 41606A2741 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740
DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950612
CATEGORY:09
INSP #2 DUST COLLECTOR SYS-#4 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN
802 # 4 COLLECTOR 41606A2741

WEEKLY: FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802515

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2744 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950612

CATEGORY:09

INSP #2 DUST COLLECTOR SYS-#5 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 5 COLLECTOR 41606A2744

WEEKLY:

FOLLOWUP REQUIRED YES/NO

▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6"

▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY

A. LISTEN FOR BLOWN DIAPHRAGMS

B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI

SEMI ANNUAL (MONTH OF JAN AND JUN):

▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL

▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS

▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES

▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS

▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE

▪ DYE/CHECK/BLACKLIGHT INSPECTION

▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS

▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES

▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS

▪ CHECK BLOWER DRIVE BELTS, SHEAVES

▪ CHECK MOTOR, BEARINGS AND MOUNT BASE

▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12

▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE

**ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802504

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2747 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19971118

CATEGORY:09

INSP #2 DUST COLLECTOR SYS-#6 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 6 COLLECTOR 41606A2747

WEEKLY:

FOLLOWUP REQUIRED YES/NO

▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____

▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____

A. LISTEN FOR BLOWN DIAPHRAGMS _____

B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____

▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____

▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____

▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____

▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE _____

▪ DYE/CHECK/BLACKLIGHT INSPECTION _____

▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____

▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____

▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____

▪ CHECK BLOWER DRIVE BELTS, SHEAVES _____

▪ CHECK MOTOR, BEARINGS AND MOUNT BASE _____

▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____

▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO
BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802501

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2750 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF:

CATEGORY:09

INSP #2 DUST COLLECTOR SYS-#7 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 7 COLLECTOR 41606A2750

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE _____
- DYECHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFW0080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

HH853500

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2865 DEP LOC: 853 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 851 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950707

CATEGORY:09

#10 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

#10 DUST COLLECTOR CLEANING ROOM 41606A2865

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE _____
- DYECHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

**ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

HH853501

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2862 DEP LOC: 853 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 853 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950707

CATEGORY:09

11 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

#11 DUST COLLECTOR CLEANING ROOM 41606A2862

WEEKLY:

FOLLOWUP REQUIRED YES/NO

▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6"

▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY

A. LISTEN FOR BLOWN DIAPHRAGMS

B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI

SEMI ANNUAL (MONTH OF JAN AND JUN):

▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL

▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS

▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES

▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS

▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE

▪ DYE/CHECK/BLACKLIGHT INSPECTION

▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS

▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES

▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS

▪ CHECK BLOWER DRIVE BELTS, SHEAVES

▪ CHECK MOTOR, BEARINGS AND MOUNT BASE

▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12

▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS
(SORTED BY PM SCHEDULE NUMBER)
HH853502 SEQ: 010 EST HRS: 1.0
EQUIPNO: 41606A2859 DEP LOC: 853 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740
DEPT CHG: 853 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950610
CATEGORY:09
#12 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN
#12 DUST COLLECTOR CLEANING ROOM 41606A2859

WEEKLY: FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

HH851500

SEQ: 010 EST HRS: 4.0

EQUIPNO: 41606A2869 DEP LOC: 851 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 851 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950610

CATEGORY:09

#8 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

#8 DUST COLLECTOR CLEANING ROOM 41606A2869

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
 - A. LISTEN FOR BLOWN DIAPHRAGMS _____
 - B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

***ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING
SIGNED OFF REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS
 (SORTED BY PM SCHEDULE NUMBER)
 HH851501 SEQ: 010 EST HRS: 1.0
 EQUIPNO: 41606A2872 DEP LOC: 851 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740
 DEPT CHG: 851 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950522
 CATEGORY:09
 #9 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN
 #9 DUST COLLECTOR CLEANING ROOM 41606A2872

WEEKLY: FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" _____
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY _____
- A. LISTEN FOR BLOWN DIAPHRAGMS _____
- B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI _____

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL _____
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS _____
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES _____
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS _____
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON
CELL PLATE _____
- DYE/CHECK/BLACKLIGHT INSPECTION _____
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS _____
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES _____
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS _____
- CHECK BLOWER DRIVE BELTS, SHEAVES _____
- CHECK MOTOR, BEARINGS AND MOUNT BASE _____
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12 _____
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE _____

**ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED
 OFF BY REVIEWER.

COMPLETED BY: _____ DATE: _____ APPROVED BY: _____

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS
 (SORTED BY PM SCHEDULE NUMBER)
 SM712500 SEQ: 010 EST HRS: 2.0
 EQUIPNO: 049012 DEP LOC: 710 FREQ: RW 0 CRAFT: 17 DEPT DOING: 741
 DEPT CHG: 712 ACCT CHG: 00046531 LAST SCHED: 20020318 LAST PERF: 19950707
 CATEGORY:09
 VISUAL INSPECTION ON ROOF - DUST COLLECTOR ROUTE - ** HVAC **

WEEKLY COMPLETE A VISUAL CHECK OF ALL STACKS FOR THE FOLLOWING:

**REPORT DAILY ANY PROBLEMS TO MAINTENANCE VERBALLY AND IN WRITTEN WORK ORDER FORM

THIS REPORT INCLUDES OBSERVATIONS MADE ON THE FOLLOWING DATE(S):	MON	TUE	WED	THU	FRI	SAT	SUN
	_____	_____	_____	_____	_____	_____	_____

MOLD UNIT 801			VISIBLE EMISSIONS OBSERVED YES/NO						
DESCRIPTION	BRASS TAG	STACK #	MON	TUE	WED	THU	FRI	SAT	SUN
ETA (INSIDE)	41611A1936		_____	_____	_____	_____	_____	_____	_____
ETA (OUTSIDE)	41611A1971		_____	_____	_____	_____	_____	_____	_____

MOLD UNIT 802			VISIBLE EMISSIONS OBSERVED YES/NO						
DESCRIPTION	BRASS TAG	STACK #	MON	TUE	WED	THU	FRI	SAT	SUN
#1 COLLECTOR	41606A2732	3262	_____	_____	_____	_____	_____	_____	_____
#2 COLLECTOR	41606A2735	3263	_____	_____	_____	_____	_____	_____	_____
#3 COLLECTOR	41606A2738	3264	_____	_____	_____	_____	_____	_____	_____
#4 COLLECTOR	41606A2741	3265	_____	_____	_____	_____	_____	_____	_____
#5 COLLECTOR	41606A2744	3266	_____	_____	_____	_____	_____	_____	_____
#6 COLLECTOR	41606A2747	3267	_____	_____	_____	_____	_____	_____	_____
#7 COLLECTOR	41606A2750	3268	_____	_____	_____	_____	_____	_____	_____

MELT DEPT - 830			VISIBLE EMISSIONS OBSERVED YES/NO						
DESCRIPTION	BRASS TAG	STACK #	MON	TUE	WED	THU	FRI	SAT	SUN
ETA COLLECTOR	41611A2051		_____	_____	_____	_____	_____	_____	_____

CLEAN ROOM - 850			VISIBLE EMISSIONS OBSERVED YES/NO						
DESCRIPTION	BRASS TAG	STACK #	MON	TUE	WED	THU	FRI	SAT	SUN
#12 COLLECTOR	41606A2859	3650	_____	_____	_____	_____	_____	_____	_____
#11 COLLECTOR	41606A2862	3651	_____	_____	_____	_____	_____	_____	_____
#10 COLLECTOR	41606A2865	3652	_____	_____	_____	_____	_____	_____	_____
# 9 COLLECTOR	41606A2872	3661	_____	_____	_____	_____	_____	_____	_____
# 8 COLLECTOR	41606A2869	3660	_____	_____	_____	_____	_____	_____	_____
# 1 BACT	41607A1780	3640	_____	_____	_____	_____	_____	_____	_____
# 2 EXIJET	41635A1890	3641	_____	_____	_____	_____	_____	_____	_____
# 3 EXIJET	41635A1891	3642	_____	_____	_____	_____	_____	_____	_____

NOTE/REPORT DAILY ANY OTHER SOURCES OF VISIBLE EMISSIONS INCLUDING ROOF FANS